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THIRD FIVE YEAR REVIEW REPORT
WAYNE WASTE OIL SUPERFUND SITE

Columbia City, Indiana

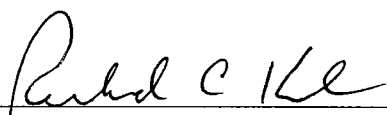
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Acronyms

Agencies	IDEM and U.S. EPA	ppb	Parts per Billion
ARARs	Applicable or Relevant and Appropriate Requirements	ppm	Parts per Million
		PRP	Potentially Responsible Party
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	RA	Remedial Action
		RD	Remedial Design
		RI	Remedial Investigation
CD	Consent Decree	RI/FS	Remedial Investigation/ Feasibility Study
CFR	Code of Federal Regulations	ROD	Record of Decision
FS	Feasibility Study	RPM	Remedial Project Manager
IDEM	Indiana Department of Environmental Management	SARA	Superfund Amendments and Reauthorization Act
ISBH	Indiana State Board of Health	Site	Wayne Waste Oil Superfund Site (also WRR)
IC	Institutional Control		
MCL	Maximum Contaminant Level	SVE	Soil vapor extraction
mg/kg	milligrams per kilogram	TCE	Trichloroethylene
NCP	National Contingency Plan	U.S. EPA	United States Environmental Protection Agency
NPL	National Priorities List	UU/UE	Unrestricted Use/ Unlimited Exposure
O&M	Operation and Maintenance		
O,M&M	Operation, Maintenance & Monitoring	µg/L	Micrograms per Liter
		VOCs	Volatile Organic Compounds
PAH	Polynuclear Aromatic Hydrocarbon	WRR	Wayne Reclamation and Recycling

Executive Summary

The completion of the current five year review confirms that the Wayne Waste Oil Superfund Site remains protective of human health and the environment in the short term. The components of the remedy selected in the 1990 Wayne Waste Oil Site Record of Decision have been implemented under the 1992 Consent Decree. The Site landfill cap and slurry wall are functional, operational and effective, with post closure maintenance assuring protectiveness.

The Site groundwater and soil treatment systems continue to operate and be monitored under the 1995 Operation, Maintenance and Monitoring Plan. As of the end of reporting for 2008, the groundwater treatment system has processed over 340,000,000 gallons of groundwater and the soil vapor extraction (SVE) system has removed over 12,000 lbs. of volatile organic compounds (VOCs).

This is the third five year review for the Wayne Waste Oil Site. The first five year review was completed and signed in June 1999, and the second five year review was signed in June 2004. Since the 2004 review, the air sparging system was discontinued as part of the groundwater treatment system in November of 2006 due to minimal removal rates. The SVE system is periodically adjusted to maximize the efficiency of the Site treatment systems. The Site groundwater treatment plant will need to continue to operate for the foreseeable future, since VOC contaminant levels remain substantially above remedial action cleanup standards.

The remedy will continue to be protective in the long term with the implementation of enhanced institutional controls. An institutional controls (IC) study which reviewed the ICs required in the Site 1990 ROD and 1992 CD was completed by the Wayne Waste Oil Site PRP Group for U.S. EPA and IDEM in January 2009. As a result of the IC study, the PRP group determined with U.S. EPA and IDEM input that enhanced ICs that cover all of the Site and are more effective in the long term are needed, including modification of one recorded deed restriction to run with the land.

Five Year Review Summary Form

SITE IDENTIFICATION		
Site name (from WasteLAN): Wayne Waste Oil Superfund Site		
EPA ID (from WasteLAN): EPA ID# IND048989479		
Region: 5	State: IN	City/County: Columbia City, Whitley
SITE STATUS		
NPL status: <input checked="" type="checkbox"/> Final <input type="checkbox"/> Deleted <input type="checkbox"/> Other (specify)		
Remediation status (choose all that apply): <input type="checkbox"/> Under Construction <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Complete		
Multiple OUs? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Construction completion date: 6/30/1995		
Has Site been put into reuse? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
REVIEW STATUS		
Lead agency: <input checked="" type="checkbox"/> EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency		
Author name: Jeff Gore		
Author title: Remedial Project Manager		Author affiliation: U.S.EPA, Region 5
Review period: 9 / 8 / 2008 to April 2009		
Date(s) of Site inspection: 10 / 15 / 2008		
Type of review: <input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only <input type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL State/Tribe-lead <input type="checkbox"/> Regional Discretion		
Review number: <input type="checkbox"/> 1 (first) <input type="checkbox"/> 2 (second) <input checked="" type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify)		
Triggering action: <input type="checkbox"/> Actual RA Onsite Construction at OU # _____ <input type="checkbox"/> Actual RA Start at OU# NA <input type="checkbox"/> Construction Completion <input checked="" type="checkbox"/> Previous Five Year Review Report <input type="checkbox"/> Other (specify)		
Triggering action date (from WasteLAN): 06 / 2 / 2004		
Due date (five years after triggering action date): 06 / 2 / 2009		

Issues:

- Institutional controls that will remain effective over the long term (either proprietary or governmental in nature) are planned for Site property, including modification of recorded deed restriction.
- Long term stewardship must be assured, which includes maintaining and monitoring effective ICs.

Recommendations and Follow-up Action

- U.S. EPA will work with the Wayne Waste Oil Site PRP Group and Columbia City to prepare and implement restrictive covenant(s) or government controls for Site property that will remain effective over the long term (e.g. run with the land), including the modification of a recorded “Declaration of Restrictions and Covenants upon Real Estate” so that it more effectively runs with the land.
- The Site Operation, Maintenance, and Monitoring Progress Reports will be amended to include a section on maintaining and monitoring ICs.

Protectiveness Statement:

The Wayne Waste Oil Site remedy is protective of human health and the environment in the short term, and the remedy is functioning as intended. Continued long term protectiveness requires implementing enhanced Site institutional controls, and operation & maintenance of Site property and monitoring systems.

1.0 INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) Region 5 has conducted a five year review of the remedial actions implemented at the Wayne Waste Oil Superfund Site in Columbia City, Indiana. U.S. EPA conducted the review between September 2008 and March 2009. This report documents the results of the five year review. The purpose of five year reviews is to determine whether the remedy at a site is protective of human health and the environment. Five year review reports document the methods, findings, and conclusions of the review, as well as identifying issues found during the review, if any, and making recommendations to address them.

This review is required by statute. U.S. EPA must implement five year reviews consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA § 121(c), as amended, states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

The NCP at title 40, part 300, section 430(f)(4)(ii) of the Code of Federal Regulations (CFR) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

U.S. EPA, Region 5, along with the Indiana Department of Environmental Management (IDEM) completed the five year review of the remedy implemented at the Wayne Waste Oil Site. The review was conducted by Jeff Gore, U.S. EPA Remedial Project Manager; Bruce Hamilton, State Project Manager with IDEM, assisted in the review. This report documents the results of the review.

This is the third five year review for the Wayne Waste Oil Superfund Site. The second five year review report was completed and signed in June 2004. The five year review is required due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure.

2.0 SITE CHRONOLOGY

Table 1. Chronology of Site Events	
Date	Event
1980	Initial investigation of landfill management problems at the Site by the State of Indiana.
December 1982	Proposal to NPL for the Wayne Waste Oil Site
September 1983	NPL final listing for the Wayne Waste Oil Site.
July 1986	First Removal Action initiated under Consent Order
August 1987	Remedial Investigation/ Feasibility Study initiated.
March 1989	Second Removal Action completed under Unilateral Order
January 1990	Remedial Investigation/ Feasibility Study completed.
March 1990	Record of Decision signed.
July 1992	RD/RA Consent Decree entered.
May 1994	Remedial Action start.
June 1995	Remedy construction completion.
August 1999	First five year review completed.
July 2000	Abandoned building demolished.
December 2002	Additional soil vapor extraction wells installed.
June 2004	Second five year review completed

3.0 BACKGROUND

3.1 Physical Characteristics

The Wayne Waste Oil Superfund Site, also referred to as Wayne Reclamation and Recycling (WRR), covers approximately 30 acres in the southeast part of Columbia City, Indiana (See figures 1-3). The area north of the Site is commercial and residential. A cemetery borders the Site on the west. The Blue River forms the south and east boundary of the Site. The area across the Blue River to the south and east includes residential and industrial park property. The Site property lies partly within the 100-year floodplain of the Blue River.

3.2 Land and Resource Use

The Site can be divided into three major areas, but all areas are included in one operable unit. The southeast portion lies within the 100 year floodplain adjacent to the Blue River, and was previously an area where liquid wastes were stored and dumped. The northeast portion was the location of a landfill area which was operated by Columbia City from 1953 to 1970. The central and western portion of the Site lies in an upland area which was the location of numerous tanks from the oil recycling and reclamation operations. Local shallow groundwater flows to the Blue River. Area residents are served with municipal drinking water. Two of the City's municipal water supply wells are located north of the Site.

3.3 History of Contamination

WRR and its division, Wayne Waste Oil, began operating an oil reclamation business at the Site in 1975. In 1976, a license to haul liquid industrial waste was granted by the Indiana Pollution Control Board. In 1980, the Indiana State Board of Health (ISBH) began an investigation as a result of reports from a former WRR employee that hazardous wastes were being illegally disposed of at the Site. ISBH determined that between February 1979 and May 1980, WRR filed hauler reports stating that it had disposed of 250,000 gallons of sludge at the Williams County Landfill in Bryan, Ohio. However, the landfill had not received any waste shipments from WRR during that time.

3.4 Initial Response

In 1982, WRR and one of its principals, Wayne Brockman, pleaded guilty to illegal "depositing of contaminants" and filing false hauler reports. They were required to pay a fine, to fund a risk assessment for the Site, and to pay for the cleanup. WRR did not perform the cleanup required under its guilty plea.

In July 1986, approximately 100 potentially responsible parties (PRPs) entered into an Administrative Order by Consent to conduct a removal action at the Site. Because this work performed from late summer 1986 to fall 1987 was not satisfactorily completed, a Unilateral Administrative Order was issued to a group of four PRPs in February 1988 (modified in March and May 1988). Work under this second order was conducted from May 1988 to March 1989.

These removal actions involved the disposal of surface and buried drums; excavation and disposal of liquids, sludges, and contaminated soil from various areas of the Site; and disposal of the contents of storage tanks. The two removal actions resulted in the removal of more than 13,000 tons of material from the Wayne Waste Oil Site.

3.5 Basis for Taking Action

Remedial planning began as the Wayne Waste Oil Superfund Site was proposed for the National Priorities List on December 30, 1982. The Site became a final listing on September 8, 1983.

In August 1987, U.S. EPA entered into an Administrative Order by Consent with over 100 PRPs to conduct the Remedial Investigation (RI)/Feasibility Study (FS).

The RI, completed in June 1989, documented that eight volatile organic compounds (VOCs) and two inorganic compounds present in the groundwater beneath the site which human health risks exceeded Maximum Contaminant Levels (MCLs). Major contaminants of concern in the groundwater included trichloroethylene (TCE) and vinyl chloride.

VOC contamination in the subsurface soils also presented a risk due to the potential for further leaching of contaminants into the groundwater. Other contaminants of concern in the soils were polynuclear aromatic hydrocarbons (PAHs) and lead, due to a risk from direct contact with or inhalation of surface soils.

The FS was completed in January 1990.

The findings of the RI/FS indicated the following:

SURFACE AND SUBSURFACE SOILS: The highest levels of volatile organic soil contamination were detected in the southwest area of the site along the Blue River; in the northern portion of the Site west of the old City Landfill; and in the southeast corner of the Site. The major contaminants of concern were chlorinated ethenes and to a lesser extent, chlorinated ethanes, toluene and alkanes. Certain inorganic compounds such as magnesium, chromium, copper, zinc and lead were detected at levels above those considered to be common in background soils.

The old City Landfill did not have an appropriate cover that complied with RCRA Subtitle D regulations. The limited information regarding waste disposal indicated that municipal solid waste was disposed there, although some hazardous waste may have been received by the City Landfill.

SURFACE WATER AND SEDIMENTS: Concentrations of inorganic parameters in surface water and sediments from the Blue River adjacent to the Site were not significantly above those upstream from the Site boundary. Copper and zinc in sediments did show slight exceedences. Concentrations of cyanide in on-site surface water sediment, pond and wetland areas were elevated. Volatile organic compounds were elevated in surface water locations on the Site.

GROUNDWATER: Groundwater flow in the upper aquifer zone at the Site is from west to east. In general, groundwater is recharged to the west of the Site, and flows toward the Blue River. The Blue River flows along the eastern and southern boundaries of the Site. The majority of the groundwater contamination is caused by chlorinated ethenes and ethanes and occurs in the same general location as the volatile organic soil contamination.

A Columbia City municipal well is located in the lower aquifer zone just north of the Site. The lower zone groundwater flow is from northwest to southeast and was not found to be contaminated.

U.S. EPA and IDEM prepared a Record of Decision (ROD) in March of 1990 that outlined a soil and groundwater containment & treatment Site remedy. A corresponding Remedial Design/ Remedial Action (RD/RA) Consent Decree (CD) was entered in court in July of 1992.

4.0 REMEDIAL ACTIONS

4.1 Remedy Selection

The response actions outlined for the Wayne Waste Oil Site in the March 1990 ROD included the following remedial components:

- * Construction, operation, and maintenance of a soil vapor extraction (SVE) system in the VOC-contaminated soil areas;
- * Construction, operation, and maintenance of a groundwater extraction, treatment and discharge system;
- * Monitoring of groundwater and air;
- * Delineate the extent of the municipal landfill;
- * Construction and maintenance of a RCRA Subtitle D compliant cap over the municipal landfill;
- * Deed restrictions to ensure the protection of the municipal landfill cap;
- * Cover PAH-contaminated soil or consolidate it under the municipal landfill cap;
- * Delineate and remediate lead-contaminated soils via soil washing, or immobilization and stabilization technologies;
- * Remove and treat the contents of all above- and below-ground tanks, and delineate the extent of contamination due to spills or leaks associated with the tanks;
- * Remove and dispose of site debris, including but not limited to all tanks (above-ground, below-ground, and partially buried), tanker trucks, and the incinerator;
- * Install an upgraded security fence around the site.

Remedial action objectives for the Wayne Waste Oil Site remedy are to contain and maintain waste material beneath the landfill cap; treat and restore groundwater contamination associated with the Site until U.S. EPA groundwater MCLs are achieved and maintained, and provide

adequate protection of human health and the environment by eliminating, reducing, or controlling risk through treatment or engineering controls. The Site is monitored to assure there are no off-site risks to human health and the environment.

4.2 Remedy Implementation

A Consent Decree was entered in the Northern District Court of Indiana in July 1992. Under this CD, a group of PRPs agreed to conduct the remedial design (RD) and complete the remedial action (RA).

The Consent Decree required additional studies to supplement the available technical information for design of the remedy. The additional studies confirmed a need for a passive gas venting system for the municipal landfill, as well as a slurry wall around the southeast area of the Site to maintain an upward groundwater gradient to prevent movement of contaminants into the lower aquifer. Additional studies also indicated that air sparging inside the slurry wall would enhance groundwater remediation, and thus, air sparge wells were incorporated for the southeast area.

At the time of earlier investigations, the owner was operating from a building on-site. During the remedial action, several additional drums and buckets of material were discovered inside the building. Although most contained very little material, removal and proper disposal of these drums and buckets was also addressed as part of the remedial action.

Analytical results from sampling conducted as part of pre-design investigations indicated that the subsurface lead was not leaching. With no direct contact threat and no impact to the groundwater, remediation of the lead-contaminated soils was not warranted.

Removal of surface debris on the landfill, removal of an incinerator, and removal of above-ground and underground storage tanks took place in 1993, in accordance with approved work plans. The RD for the landfill (City of Columbia City) was approved in January 1994, construction began in May 1994 and construction was complete in August 1994. The RD for the remaining activities (Non-City Settlers) was approved in February 1994 and construction began in June 1994. The soil vapor extraction and groundwater pump and treat systems were completed in January 1995 with all Site construction completed in June 1995.

4.3 Institutional Controls

Institutional Controls ("ICs") are non-engineered instruments, such as administrative and legal controls, that help to minimize the potential for exposure to contamination and that protect the integrity of the remedy. ICs are required to assure the long term protectiveness for any areas which do not allow for unlimited use or unrestricted exposure (UU/UE). ICs are required by the ROD and CD to restrict property use and maintain the integrity of the remedy. The Site 1990 ROD and 1992 CD required Institutional Controls in the form of Site deed restrictions. An institutional controls study which reviewed the ICs required in the Site 1990 ROD and 1992 CD was completed by the Wayne Waste Oil Site PRP Group for U.S. EPA and IDEM in January 2009. A summary of the implemented and planned ICs for the Site is listed in Table 2.

Table 2. Institutional Controls Summary Table		
Media, Engineered Controls & Areas that Do Not Support UU/UE on Current Conditions	IC Objective	IC Instrument Implemented or Planned
Site boundary/ Site area (~30 acres): On-site soil area (~2.8 acres). Property parcel owned by the City of Columbia City.	Restricts use of land, groundwater underlying Site and assures integrity of landfill & other RA components.	Declaration of Restrictions and Covenants upon Real Estate recorded Doc. No. 93-3-180 at Whitley County Recorder's office on March 9, 1993 (implemented). Refer to figures 2 and 3.
Site boundary/ Site Area (~30 acres): On-site soil landfill cap (~4 acres) and other on-site soil areas (~26 acres) including other site remedy property. Property owned by the City of Columbia City, Wayne Reclamation & Recycling, and Holmes & Company.	Prohibits use of land, groundwater underlying Site and assures integrity of landfill & other RA components.	Restrictive Covenants or governmental controls for Site property that run with the land, including modification of 1993 recorded Declaration of Restrictions and Covenants upon Real Estate to run with the land (planned). Refer to figures 2 and 3.
Site boundary/ Site area (~30 acres): Groundwater underlying on-site landfill cap (~4 acres) and groundwater underlying other on-site areas (~26 acres).	Prohibits use of land, groundwater underlying Site, and assures integrity of landfill & other RA components.	Restrictive Covenants or governmental controls for Site property that run with the land, including modification of 1993 recorded Declaration of Restrictions and Covenants upon Real Estate to run with the land (planned).

The Site map Figures 1, 2 and 3 attached to this document outline the Site property boundary, which is the area addressed by institutional controls at the Site. Figure 2 outlines Site property parcels owned by Wayne Reclamation & Recycling Inc., Holmes & Company Inc., and the City of Columbia City.

CURRENT AND PLANNED INSTITUTIONAL CONTROLS

Site Declaration of Restrictions and Covenants upon Real Estate Currently Implemented:

A Declaration of Restrictions and Covenants upon Real Estate (Doc. No. 93-3-180) was recorded at the Whitley County Recorder's office on March 9, 1993, on a 2.8 acre parcel owned by the City of Columbia City, which restricts use of land and groundwater underlying the Site remedy, and assures the integrity of landfill and other RA components. (Refer to figures 2 and 3.) Approximately 2.8 of the 4.4 acres owned by the City of Columbia City are currently covered by the Declaration.

Institutional Controls Planned: Institutional controls in the form of restrictive covenants or government controls that will remain effective over the long term are necessary for the Site, in order to assure that all property on the Site is properly restricted and that the remedy is protected over the long term. The additional restrictive covenant(s) or government controls would cover all Site property, and likely include a modification of the recorded 1993 Declaration of Restrictions and Covenants upon Real Estate so that it more effectively runs with the land.

CURRENT COMPLIANCE

Based on the Site inspection conducted by U.S. EPA and IDEM in October 2008, compliance with the use restrictions was observed. No Site uses inconsistent with the intended uses and restrictions as depicted in the ICs were observed. Furthermore, there was no evidence of impairments of the remedial action components at the Site.

4.4 System Operations/Operation and Maintenance (O&M)

The operation and maintenance program at the Wayne Waste Oil Superfund Site includes semi-annual groundwater monitoring, SVE system effluent sampling, influent and effluent groundwater treatment system sampling and maintenance, groundwater elevation measurements, institutional controls compliance, and landfill and other Site maintenance.

The goals of the remedial operations and maintenance at the Wayne Waste Oil Superfund Site include the elimination of any excess soil ingestion, inhalation, direct contact, or groundwater leachate human health risks by treatment, containment and removal of contaminated soils and sediments. Groundwater remedial objectives are the attainment of primary and secondary maximum drinking water contaminant levels (MCLs), and elimination of any excess life-time cancer risk in groundwater.

Excess human health risks due to contaminated soils and sediments are being addressed by the soil remedies at the Site. The removal actions of 1993 and the municipal cap construction completed in 1994 reduced a substantial portion of the Site risks. The SVE system has been operating since 1995, and has removed over 12,000 lbs. of VOCs as of the end of 2008. Soil VOC cleanup standards are based on levels that will not leach contaminants to the groundwater, and are outlined in the Site Operation, Maintenance and Monitoring (O,M&M) Plan.

The Site slurry wall, groundwater pump and treatment and air sparging system have been operational since 1995, with the air sparging system being discontinued in November of 2006 due to minimal removal rates. The groundwater treatment system has processed over 340,000,000 gallons of groundwater as of the end of 2008, and assures that contaminated Site groundwater is contained and treated on-site. Groundwater contaminant levels and risks continue to be reduced toward cleanup levels as listed in the O,M&M Plan.

The second Five Year Review Report for the Wayne Waste Oil Site was completed and signed in June 2004.

Current annual O&M costs at the Wayne Waste Oil Site include the groundwater treatment system, SVE & landfill operation and maintenance, sampling, lab analysis, reporting, and Site inspections by U.S. EPA and IDEM. Total estimated annual O&M costs for the last three years are approximately \$200,000 per year.

Table 3. Annual System Operations/ O&M Costs		
Dates		Total Cost Estimate
From	To	
Jan. 1, 2006	Dec. 31, 2006	\$200,000
Jan. 1, 2007	Dec. 31, 2007	\$200,000
Jan. 1, 2008	Dec. 31, 2008	\$200,000

5.0 PROGRESS SINCE LAST FIVE YEAR REVIEW

This is the third five year review for the Wayne Waste Oil Site. U.S. EPA completed the second five year review in June 2004.

Table 4: Actions Taken Since the Last Five Year Review					
Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
Site SVE, groundwater & treatment plant monitoring	O&M monitoring should continue and include new SVE wells and treatment plant flushing	Wayne Waste Oil Group/ InSite	Ongoing	Upgraded monitoring of SVE and treatment plant systems.	Ongoing
Site gate key, GW well locks, Site maintenance	Provide gate key to USEPA, locks for wells & repair SVE & LF erosion issues	Wayne Waste Oil Group/ InSite	2004	Gate key mailed, well locks installed, SVE & LF repairs made	2004

The 2004 review recommended the following:

- 1) Monitoring should continue on the new SVE wells installed during 2003 as part of the ongoing operation and maintenance sampling program.
- 2) Operation and maintenance monitoring should continue on the groundwater treatment system to assure Site plume containment and treatment.
- 3) Groundwater treatment plant discharge line flushing, such as the event in December 2003, should be repeated in the future if iron sediments continue to build up and reduce the discharge line flow rate.
- 4) Locks need to be provided for monitoring wells GM-1 and all the groundwater wells

monitored by the Wayne Waste Oil Site group.

- 5) The air line at SVE well 34 needs to be replaced or repaired.
- 6) The two erosion spots on the south side of the site landfill need to be filled and graded.
- 7) A copy of the Wayne Waste Oil Site gate key is going to be mailed to U.S. EPA and IDEM by the contractor InSite.

Actions taken at the Site after the 2004 recommendations:

- 1) Monitoring of the Site SVE system continues to include the wells installed in 2003, and SVE wells are adjusted as needed during the O&M program.
- 2) Monitoring of the groundwater treatment system wells and treatment plant continues in the ongoing O&M program.
- 3) The groundwater treatment plant discharge line continues to be periodically flushed in the O&M program to relieve iron sediment build-up.
- 4) Locks on groundwater wells are inspected and replaced as needed, as part of the Site groundwater monitoring program.
- 5) The air line at SVE well 34 was inspected and repaired in 2004.
- 6) The two erosion spots on the landfill were inspected and graded in 2004. Landfill inspections and maintenance continue to be a part of the Site O&M program.
- 7) A copy of the Site gate key was mailed to U.S. EPA in 2004 by InSite.

6.0 FIVE YEAR REVIEW PROCESS

6.1 Administrative Components

The Wayne Waste Oil Superfund Site five year review report was prepared by Jeff Gore, U.S. EPA Remedial Project Manager. Bruce Hamilton, State Project Manager with the IDEM assisted in the review. The five year review consisted of a Site inspection and review of relevant documents. The notice letter to IDEM regarding initiation of the five year review was sent September 8, 2008.

6.2 Community Notification and Involvement

The completed third five year review report will be available in the Site information repository, and the U.S. EPA website for public view. An advertisement notice regarding the five year

review process was placed in the Columbia City, IN Post & Mail newspaper for public review on October 18, 2008 and is included as an attachment to this report. No questions or comments regarding the Site five year review were received during the advertisement comment period.

Community relations ongoing at the Site includes providing information on the ongoing Site operation & maintenance program currently being carried out to assure that human health and the environment are protected. The town of Columbia City and a business adjacent to the Site have been contacted and communicated with regarding the implementation of institutional controls at the Site.

6.3 Document Review

In preparation for this five year review report, Wayne Waste Oil Site documents were reviewed including:

- Second Five Year Review Report, June 2004.
- First Five Year Review Report, June 1999.
- RD/RA Consent Decree, July 1992.
- Record of Decision, March 1990.
- Institutional Controls Study completed by the PRP Site Group, January 2009.
- Wayne Waste Oil Site file, and operation & maintenance documents.

6.4 Data Review

The Wayne Waste Oil Superfund Site operation and maintenance sampling program has been completed and reported at the Site through 2008. Approximately 20 groundwater monitoring and recovery wells are sampled semi-annually in the program. Various SVE wells are sampled in the network on a monthly basis, along with the groundwater treatment plant including the air stripper. Although the soil and groundwater treatment systems continue to reduce Site contaminants of concern toward groundwater MCLs, a number of reported results in 2008 continue to show that the groundwater contamination levels remain substantially above the cleanup standards for the compounds of concern at the Site, specifically trichloroethylene (TCE) and the various degradation compounds. In regard to treatment of these compounds, monthly groundwater measurements show that the 10 recovery wells for the Site groundwater treatment system continue to provide an inward gradient for groundwater to the treatment plant and away from the Blue River. The slurry wall located in the southeast portion on the Site provides an additional continuous barrier against offsite contaminant migration.

The most recent reported monitoring results for 2008 are found in the current operation and maintenance document entitled Semi-Annual Progress Report Number 26, Wayne Reclamation & Recycling, Inc. Wayne Waste Oil Site, August, 2008. The highest levels of groundwater

contaminants are found in the southeast and southern portion of the Site. For example, although monitoring well-9S has shown a substantial decrease from TCE levels of 67,000 ug/l in 1997, the August 2008 report lists a TCE level of 524 ug/L which is substantially above the 5 ug/L U.S. EPA MCL.

A primary objective of the groundwater and soil treatment systems at the Site is to contain the contaminants and prevent them from migrating beyond the Site boundaries, thereby protecting human health and the environment. The Site treatment systems required in meeting this objective include the Site landfill, slurry wall, and soil and groundwater treatment systems. An ongoing remedial objective involves extracting and treating contaminants in order to reduce groundwater leachate from soil and improve groundwater quality to attain the Site's U.S. EPA human health groundwater MCLs. Although the treatment systems continue to extract, treat and reduce the on-site contamination, they are likely to be needed for the foreseeable future in order to try to meet groundwater MCLs for the Site. The Site groundwater treatment system should continue to be monitored and adjusted accordingly in the future, to assure that groundwater contamination continues to be contained within the Site boundaries and is being efficiently treated and reduced toward U.S. EPA MCLs.

6.5 Site Inspection

The Site inspection for this five year review was performed on October 15, 2008 by Jeff Gore of U.S. EPA and IDEM project manager Bruce Hamilton. David Laws and Sarah Laws of InSite Corporation were also present at the Site on October 15 performing Site O&M monitoring. The five year review site inspection checklist was used as a guideline for the Site inspection, and is available in the Site file and administrative record.

The Site was found to be in good condition during the inspection and free of debris except for some pieces of a dead tree along the southern fence line, which had been cut down and placed there. The Site access fence remained in place, and the security gate was unlocked as InSite was expecting our arrival at the Site for the inspection. The treatment plant building door was also open as InSite was performing O&M monitoring that day. The treatment plant was found to be operating properly.

The Site landfill was found to be well vegetated and had been recently mowed. A walk over and around the perimeter of the landfill found no significant ruts or surface erosion. It began to rain as the landfill inspection was being completed.

All groundwater monitoring wells and recovery wells inspected were found to be properly capped and locked. In summary, no major issues were found at the Site during the inspection.

An interview and conversation with InSite employees David and Sarah Laws regarding institutional controls took place in the treatment building, after the Site inspection was completed. Jeff Gore and Bruce Hamilton were informed when leaving the Site that InSite staff would properly secure and lock the access gate after the ongoing monitoring event had been completed.

7.0 TECHNICAL ASSESSMENT

7.1 Question A: Is the remedy functioning as intended by the decision documents? Yes

RA Performance: The remedial action components included in the Wayne Waste Oil 1990 ROD have been implemented, and the Site remains in operation and maintenance. The RD for the landfill (City of Columbia City Settlor) was approved in January 1994, construction began in May 1994 and construction was complete in August 1994. The RD for the remaining activities (Non-City Settlers) was approved in February 1994 and RA construction began in June 1994. The soil vapor extraction and groundwater pump and treatment systems were completed in January 1995 with all Site construction completed in June 1995, and Site associated contamination levels continue to be reduced toward groundwater MCLs.

Cost of System Operations/O&M: Current annual O&M costs at the Wayne Waste Oil Site are primarily attributed to operation, maintenance and management of the Site landfill, soil treatment and groundwater treatment systems. 2008 Site estimated annual costs are approximately \$200,000. Other costs involve U.S. EPA and IDEM project manager time and travel related to the Site, and unexpected Site construction or maintenance.

Opportunities for Optimization: The SVE system and groundwater treatment system can be adjusted as needed during ongoing operation and maintenance to optimize performance.

Early Indicators of Potential Remedy Problems: There have been no indicators of significant potential remedy issues in relation to the Wayne Waste Oil Site since the last five year review in 2004. The Site treatment plant should operate for the foreseeable future, since contaminant levels are substantially above remedial action cleanup standards.

Implementation of Institutional Controls and Other Measures: The Site 1990 ROD and 1992 CD required Institutional Controls in the form of Site deed restrictions and the recording of a copy of the CD in title records. A Declaration of Restrictions and Covenants upon Real Estate (Doc. No. 93-3-180) was recorded at the Whitley County Recorder's office on March 9, 1993, on a parcel owned by Columbia City, which restricts use of land and groundwater underlying the Site remedy, and assures the integrity of landfill and other RA components, on such parcel. Additional institutional controls that run with the land, whether proprietary or governmental are planned for Site property, including a modification of the 1993 recorded implemented Declaration of Restrictions and Covenants upon Real Estate, so that it is more effective over the long term.

Current Use Compatibility with Land and Groundwater Use Restriction: Based on the Site inspection conducted by U.S. EPA and IDEM in October 2008, compliance with the use restrictions was observed. No Site uses inconsistent with the intended uses and restrictions as depicted in the ICs were observed. Furthermore, there was no evidence of impairments of the remedial action components at the Site.

7.2 Question B: Are the assumptions used at the time of remedy selection still valid? Yes.

Changes in Standards and To Be Considered: Standards outlined and reviewed in the Site 1990 ROD, and 1999 and 2004 Five Year Review Reports are still valid at the Wayne Waste Oil Site. There have been no known changes in standards to be considered since the last review in the 2004 Five Year Review Report.

Changes in Exposure Pathways: No new exposure pathways have been discovered at the Wayne Waste Oil Site since the last five year review in 2004.

Changes in Risk Assessment Methodologies: Risk assessment methodologies used at the Wayne Waste Oil Site since the second five year review in 2004 have not changed, and do not call into question the protectiveness of the remedy.

7.3 Question C: Has any other information come to light that could call into question the protectiveness of the remedy? No.

There has been no other known information that could call into question the protectiveness of the remedy.

Technical Assessment Summary

According to the data reviewed and the Site inspection, the remedy is substantially functioning as intended in the Wayne Waste Oil Site 1990 ROD. Ongoing O&M Site monitoring continues to provide assurance that the remedy is functioning as intended. No other additional information has been identified which would call into question the protectiveness of the remedy.

8.0 ISSUES

The following issue in Table 5 was identified during the five year review process which impacts protectiveness under CERCLA.

Table 5. Issues that Impact Protectiveness		
Issue	Currently Affects Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
Institutional controls for Site property that more effectively run with the land, including modification of 1993 Declaration of Restrictions and Covenants upon Real Estate	N	Y
Long term stewardship for maintaining and monitoring effective ICs	N	Y

Y=yes: N=no

9.0 RECOMMENDATIONS AND FOLLOW-UP ACTION

Recommendations and follow-up actions in Table 6 for issues that impact protectiveness and were noted in Table 5:

- U.S. EPA will work with the Wayne Waste Oil Site PRP Group and Columbia City to prepare and implement restrictive covenant(s) or government controls for Site property that will remain effective over the long term (e.g. run with the land), including the modification of a recorded "Declaration of Restrictions and Covenants upon Real Estate" so that it more effectively runs with the land.
- The Site Operation, Maintenance, and Monitoring Progress Reports will be amended to include a section on maintaining and monitoring ICs.

Table 6. Recommendations and Follow-up Actions						
Issue	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness(Y/N)	
					Current	Future
Existing Site ICs, Declaration of Restrictions	Implement Sitewide restrictive covenants or governmental controls that more effectively run with the land	Wayne Waste Oil Group/ Columbia City	USEPA/ IDEM	March 2010	N	Y
Long term stewardship for effective ICs	Amend O,M&M Progress Reports to include section on ICs	Wayne Waste Oil Group	USEPA/ IDEM	October 2009	N	Y

Y=yes; N=no

10.0 PROTECTIVENESS STATEMENT(S)

The Wayne Waste Oil Site remedy is protective of human health and the environment in the short term, and the remedy is functioning as intended. Continued long term protectiveness requires implementing enhanced Site institutional controls, and operation & maintenance of Site property and monitoring systems.

11.0 NEXT REVIEW

The five year review for the Wayne Waste Oil Site is a statutory review. U.S. EPA conducts statutory reviews at sites where the remedies selected result in hazardous substances, pollutants, or contaminants remaining at levels above those that allow for unlimited use and unrestricted exposure. Since the Wayne Waste Oil Site contains hazardous substances, pollutants or contaminants that will potentially remain above U.S. EPA and State of Indiana regulatory standards in the future, the Site will require ongoing Five Year Reviews. Therefore, another report will be scheduled five years after this report is completed. The completion date of the current five year review is the signature date shown on the cover attached to this report.

Site Location

Superfund
U.S. Environmental Protection Agency

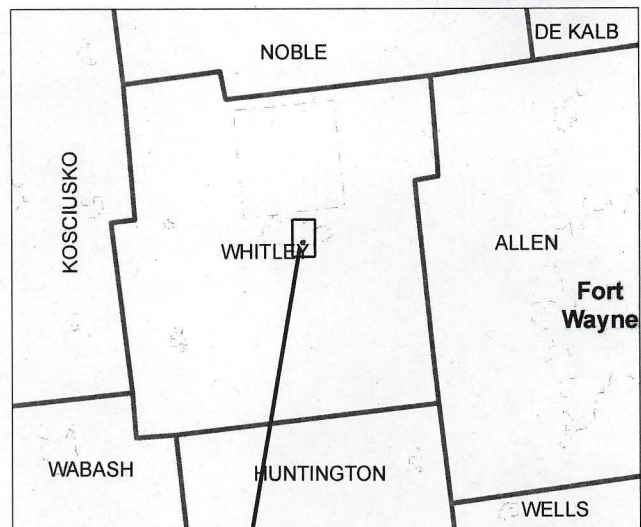


Wayne Waste Oil Whitley County, IN

IND048989479



State



County



Site

Figure 1

Produced by Julie Schilf
U.S. EPA Region 5 on January 6, 2009
Image Date: 2005





LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- RIVER GAUGE POINT LOCATION
- RIVER WATER SAMPLING LOCATION
- SYSTEM PIPING
- WAYNE RECLAMATION & RECYCLING INC. PROPERTY (23.6 ACRES)
- HOLMES & COMPANY, INC. PROPERTY (6.2 ACRES)
- CITY OF COLUMBIA CITY PROPERTY (WEST = 2.8 ACRES, EAST = 1.6 ACRES)
- PROPERTIES AFFECTED BY INSTITUTIONAL CONTROLS
- FENCE LINE

NOTES

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH OBTAINED FROM THE INDIANA MAP WEBSITE.
2. RECORD OF CONSTRUCTION PIPING LAYOUT IS BASED ON FIELD MEASUREMENTS AND OBSERVATIONS. PIPING LAYOUT WAS NOT SURVEYED.

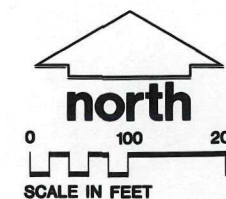


FIGURE 2

PROPERTIES AFFECTED BY INSTITUTIONAL CONTROLS

WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

Printed

Sheet Number

1 of 2

Drawing Number

4050671

010102

D1



Releases	By	Date	Appr.	Developed By	Drawn By
				BRT	DLF
Issuance/Revisions				Approved By	Date
				Reference	
				Consultants	

Institutional Control (IC) Review

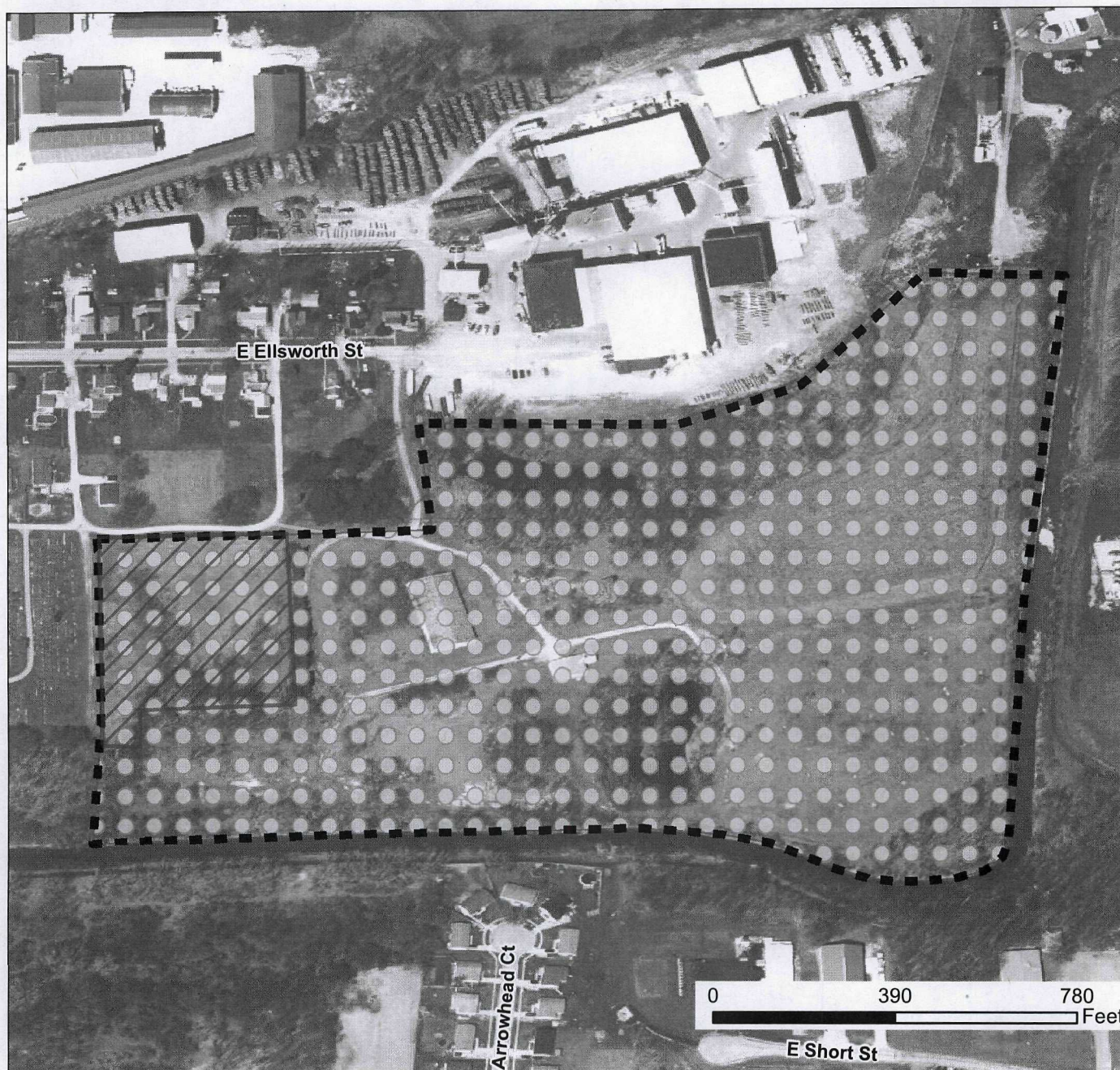
Areas Depicting Required and
Implemented Institutional Controls

Superfund
U.S. Environmental Protection Agency



Wayne Waste Oil
Whitley County, IN

IND048989479



Legend



Site Outline



Required ICs -
Access, Land Use, and Groundwater use Restrictions



Implemented IC -
1993 Declaration of Restrictions and Covenants Upon Real Estate

Figure 3



EPA Disclaimer: Please be advised that areas depicted in the map have been estimated. The map does not create any rights enforceable by any party. EPA may refine or change this data and map at any time.

Produced by Julie Schilf
U.S. EPA Region 5 on February 2, 2009
Image Date: 2005

Attachment 1

List of Wayne Waste Oil Site Documents Reviewed for Five Year Review Report

- Second Five Year Review Report, June 2004.
- First Five Year Review Report, June 1999.
- RD/RA Consent Decree, July 1992.
- Record of Decision, March 1990.
- Institutional Controls Study completed by the PRP Site Group, January 2009.
- Wayne Waste Oil Site file, and operation & maintenance documents.



EPA Reviewing Wayne Waste Oil Superfund Site Columbia City, Indiana

U.S. Environmental Protection Agency, in consultation with Indiana Department of Environmental Management, is reviewing the Wayne Waste Oil Superfund site to ensure the cleanup continues to protect people and the environment. The Superfund law requires reviews at least every five years at sites where the cleanup is complete but waste remains managed on-site.

EPA will evaluate site documents, results of periodic inspections, and operation & maintenance sampling activities. Should we find any areas of potential concern, we will continue to work with the companies responsible for the cleanup to correct them. EPA will issue a report on the five-year review by May 2009.

This is the third five-year review for this site.

Information on the Wayne Waste Oil site can be found at:

Peabody Library
203 N. Main, Columbia City, Indiana

EPA encourages public comment. Written comments should be postmarked within 30 days of the date this advertisement is published.

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Or call toll-free, 800-621-8431, weekdays 9:30 a.m. to 4:30 p.m.